AVC-ES105-M

Multi-Parameter Meteorological Sensor

Quick Installation Guide – RS485

What's Inside

Item	Qty	Description
Transmitter Unit	1	Multi-sensor module with RS485 interface
USB-to-RS485 Adapter	Optional	For PC configuration (order separately if needed)
Documentation	1	Quick Installation Guide

Wiring Connections

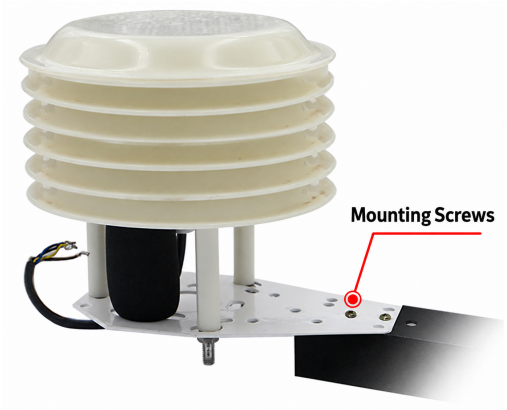
Power: 10–30V DC wide-input range. **Communication:** RS485 Modbus-RTU protocol. **Critical:** A and B lines must not be reversed.

Wire	Color	Voltage/Signal	Notes
Power (+)	Brown	10–30V DC	Positive supply
Power (–)	Black	Ground	Return to power supply
RS485-A	Yellow	Signal A	Do not swap with B
RS485-B	Blue	Signal B	Terminate at 2 cable ends (120Ω)

■ ***Tip:*** *For multi-device buses, add a 120Ω terminal resistor across A and B at cable ends.*

Mounting & Installation

Step	Action
1	Fasten sensor to louvered radiation shield bracket using base plate on underside.
2	Route cables through bracket arm. Keep clear of sharp edges and moving parts.
3	Mount assembly vertically. Ensure level, unobstructed positioning for accurate readings.
4	See User Manual appendix for detailed dimensions and mounting specifications.



First-Time Communication Setup

Step 1: Install Configuration Tool

Download and install the **AVCOMM 485 Parameter Configuration Tool** from your resource package.

Step 2: Connect USB Adapter

Plug USB-to-RS485 adapter into PC. Identify COM port in **Device Manager > Ports**.

Step 3: Power & Isolate

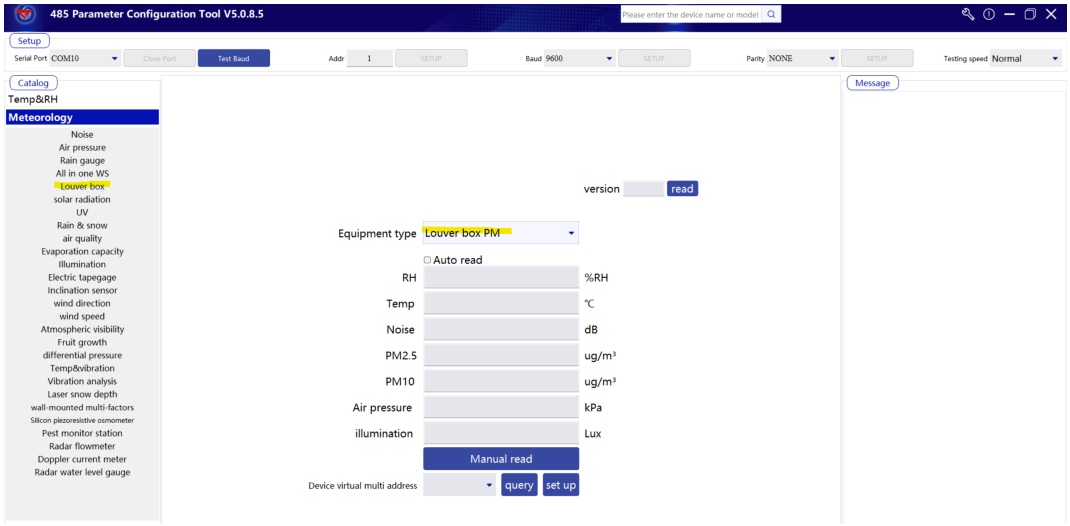
Apply 10–30V DC power. **Test ONE device at a time** — disconnect others.

Step 4: Auto-Detect

Click **Test Baud Rate**. Factory defaults: **9600 bit/s, address 0x01**.

Step 5: Adjust & Verify

Modify address/baud rate as needed. Confirm live sensor readings.



Quick Troubleshooting

Issue	Cause	Solution
Device not detected	Wrong COM port or USB driver missing	Check Device Manager; reinstall driver
Wrong address	Duplicate addresses or multiple devices on bus	Test devices one at a time; default is 0x01
Baud rate mismatch	Master and sensor settings differ	Use default: 9600 bit/s, 8-N-1
Polling timeout	Interval too short or response time too low	Set both ≥ 200 ms
A/B not detected	Lines reversed or bad connection	Verify Yellow (A) and Blue (B) polarity
Long bus failures	Signal attenuation or impedance mismatch	Add 120Ω resistors at cable ends; power locally
No response	Driver missing or power off	Verify 10–30V DC supply; install driver

■ Safety Notice: This device is not a safety switch or emergency stop device. For measurement and monitoring only. Consult the full AVC-ES105-M User Manual.

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For complete specs, Modbus register map, and support: **AVC-ES105-M User Manual**